

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 03/05918

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C279/18 A61K31/155 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 02/074756 A (PENTAPHARM AG ;ZIEGLER HUGO (CH)) 26 September 2002 (2002-09-26) claims 1,12-15	1,2,4-6, 8-16
X	STURZEBECHER J ET AL: "3-Amidinophenylalanine-based Inhibitors of Urokinase" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, OXFORD, GB, vol. 9, no. 21, 1 November 1999 (1999-11-01), pages 3147-3152, XP004181024 ISSN: 0960-894X page 3148, paragraph 1 tables 1,2 page 3147, paragraph 1 * Seite 3148, Formel 2 * ----- -/--	1-6, 13-16

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

29 October 2003

Date of mailing of the international search report

09.01.2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 03/05918

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MAGDOLEN V ET AL: "Natural and synthetic inhibitors of the tumor-associated serine protease urokinase-type plasminogen activator." ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY. UNITED STATES 2000, vol. 477, 2000, pages 331-341, XP008021329 ISSN: 0065-2598 table 2 * Seite 337, letzter Absatz bis Seite 338, erster Absatz *	1,4-6, 11,13-16
Y	WO 00/04954 A (STUERZEBECHER JOERG ;LUTZ VERENA (DE); MAGDOLEN VIKTOR (DE); WILHE) 3 February 2000 (2000-02-03) claims 1,6,7	1-6, 11-16
Y	HEECHUNG YANG ET AL: "SELECTIVE INHIBITION OF UROKINASE BY SUBSTITUTED PHENYLGUANIDINES: QUANTITATIVE STRUCTURE-ACTIVITY RELATIONSHIP ANALYSES" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 33, no. 11, 1990, pages 2956-2961, XP002059264 ISSN: 0022-2623 table 1 page 2956, right-hand column, paragraph 3	1-6, 11-16
Y	DE 199 40 389 A (WILEX BIOTECHNOLOGY GMBH) 1 March 2001 (2001-03-01) claim 9 * Seite 8, Verbindungen ST296 und ST 298 *	1-6, 11-16
Y	DE 100 29 014 A (UNIV SCHILLER JENA) 20 December 2001 (2001-12-20) claims 1,3	1-6, 11-16
Y	SPERL S ET AL: "(4-Aminomethyl)phenylguanidine derivatives as nonpeptidic highly selective inhibitors of human urokinase" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 97, no. 10, 9 May 2000 (2000-05-09), pages 5113-5118, XP002169711 ISSN: 0027-8424 page 5113; table 1 page 5112, right-hand column, paragraph 2	1-6, 11-16
Y	WO 01/070204 A (MAX PLANCK GESELLSCHAFT ;STUERZEBECHER JOERG (DE); JACOB UWE (DE);) 27 September 2001 (2001-09-27) table 1	1-6, 11-16
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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/05918

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NIENABER VICKI ET AL: "Re-engineering of human urokinase provides a system for structure-based drug design at high resolution and reveals a novel structural subsite." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 275, no. 10, 10 March 2000 (2000-03-10), pages 7239-7248, XP002253397 ISSN: 0021-9258 page 7247, left-hand column, paragraph 2 -----</p>	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 03/05918

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 13 relates to a method for treatment of the human or animal body, the search was carried out and was based on the stated effects of the compound or composition.
2. ☒ Claims Nos.: 7
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210 x

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see FURTHER INFORMATION sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4 (in part), 5, 6, 8-13 (in part), 14-16

Remark on Protest

☐

The additional search fees were accompanied by the applicant's protest.

☐

No protest accompanied the payment of additional search fees.

Continuation of Box I, 2

Claim 7

The current claims 1-6, 8-13, 14 and 16 relate to a disproportionately large number of possible compounds ("R6 are any residues", "aryl", "(substituted) heteroaryl (residue)", "R6 is the residue of an amino acid, a peptide or a polypeptide", "methylene groups are substituted", "piperidyl group which is substituted", "aromatic or cycloaliphatic ring", "alkyl residue", "substituted cycloalkyl residue", "aralkyl residue", "O aryl", "O-heteroaryl", "cycloaliphatic ring which is substituted", "heterocycloaliphatic residue", "substituted phenyl group") of which only a small portion are supported by the description (PCT Article 6) and can be regarded as having been disclosed in the application (PCT Article 5). In the present case the claims lack the proper support and the application lacks the requisite disclosure to such an extent that it appears impossible to carry out a meaningful search covering the entire range of protection sought. Therefore, the search was directed to the parts of the claims that appear to be supported and disclosed in the above sense, that is, the compounds as defined in the embodiments, including closely related homologous compounds.

The applicant is advised that claims relating to inventions in respect of which no international search report has been established normally need not be the subject of an international preliminary examination (PCT Rule 66.1(e)). In its capacity as International Preliminary Examining Authority the EPO generally will not carry out a preliminary examination for subjects that have not been searched. This also applies to cases where the claims were amended after receipt of the international search report (PCT Article 19) or where the applicant submits new claims in the course of the procedure under PCT Chapter II. After entry into the regional phase before the EPO, however, an additional search can be carried out in the course of the examination (cf. EPO Guidelines, Part C, VI, 8.5) if the deficiencies that led to the declaration under PCT Article 17(2) have been remedied.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 03/05918

The International Searching Authority has determined that this international application contains more than one invention or group of inventions, namely:

1. claims 1-4 (in part), 5, 6, 8-13 (in part), 14-16

use of the urokinase inhibitors of formula I for treating tumours;

2. claims 1-4 (in part), 7, 8-13 (in part)

use of the urokinase inhibitors of formula I for treating pemphigus vulgaris.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/05918

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02074756	A	26-09-2002	WO 02074756 A2	26-09-2002
			EP 1373234 A2	02-01-2004
WO 0004954	A	03-02-2000	AT 230599 T	15-01-2003
			AU 754958 B2	28-11-2002
			AU 5161599 A	14-02-2000
			BR 9912327 A	02-05-2001
			CA 2338073 A1	03-02-2000
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			ES 2189455 T3	01-07-2003
			JP 2002521348 T	16-07-2002
			US 2003013723 A1	16-01-2003
			US 6624169 B1	23-09-2003
DE 19940389	A	01-03-2001	DE 19940389 A1	01-03-2001
			AU 7903400 A	19-03-2001
			WO 0114324 A1	01-03-2001
			EP 1206447 A1	22-05-2002
DE 10029014	A	20-12-2001	DE 10029014 A1	20-12-2001
			AU 8575001 A	24-12-2001
			CA 2411981 A1	09-12-2002
			WO 0196286 A2	20-12-2001
			EP 1294742 A2	26-03-2003
			US 2003166576 A1	04-09-2003
WO 0170204	A	27-09-2001	DE 10013715 A1	27-09-2001
			AU 6379101 A	03-10-2001
			WO 0170204 A2	27-09-2001
			EP 1267854 A2	02-01-2003
			US 2003100584 A1	29-05-2003